IN THE SPECIFICATION:

Please change the paragraph beginning at line 7 of page 8 to read as follows:

--FIG. 6 illustrates another system embodiment where an in-line polarimeter is utilized to monitor and control, in conjunction with other components, the state of polarization of an optical signal passing through the system. In particular, an "active polarization control" (APC) arrangement 60 is illustrated as comprising an in-line polarimeter 62, used in conjunction with a feedback control element 64 and polarization controller 66 to evaluate and adjust (when necessary) the polarization of an input signal ~~I~~ that has propagated along an optical signal path, such as a transmission fiber 68. The combination of feedback control element 64 with a fully-characterized polarization controller 66 enables deterministic feedback control to quickly and effectively maintain a desired, arbitrary polarization state in the output signal. When the output of APC 60 is to be provided as an input to a polarization sensitive device 70, a preferred embodiment utilizes a section of polarization maintaining fiber (PMF) 72 as the lightguiding medium between the output of APC 60 and the input of device 70.--

Please change the paragraph beginning at line 3 of page 9 to read as follows:

--In ~~additional~~ addition to stabilizing at one position, APC 60 is able to alternate between two orthogonal polarizations, as shown in FIG. 9. By simply reversing the signs of the S1, S2 and S3 Stokes vectors, it is possible to change the path of light from one arm ~~74~~ 75 of beam splitter 72 to another arm 76. A final test that is useful in this configuration of the present invention is to change the wavelength while APC 60 directs light through either arm ~~74~~ 75 or arm 76 of beam splitter 72. FIG. 10 illustrates the results of this test, where it is clear that both APC 60 and beam splitter 72 exhibit stable performance over the entire 70nm range that was tested.--